



Sequence Listing

<110> Sidhu, Sachdev S.
Weiss, Gregory A.
Wells, James A.

<120> TRANSFORMATION EFFICIENCY IN PHAGE DISPLAY THROUGH MODIFICATION OF A
COAT PROTEIN

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<140> US 09/380,447
<141> 1999-09-01

<150> US 60/134,870
<151> 1999-05-19

<150> US 60/133,296
<151> 1999-05-10

<150> US 60/103,514
<151> 1998-10-08

<150> US 60/094,291
<151> 1998-07-27

<150> PCT/US99/16596
<151> 1999-07-22

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5

10

15

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa

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Asp Asp Gly Glu Ala
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Val Ile Val Gly Ala Thr Ile Gly Ile Lys Leu Phe Lys Lys Phe
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Thr Ser Lys Ala Ser
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Thr Ser Lys Ala Ser
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				20					25					30

Val	Ile	Val	Gly	Ala	Thr	Ile	Gly	Ile	Lys	Leu	Phe	Lys	Lys	Phe
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				20					25					30

Val	Ile	Val	Gly	Ala	Thr	Ile	Gly	Ile	Lys	Leu	Phe	Lys	Lys	Phe
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				20					25					30

Leu	Val	Val	Gly	Ala	Thr	Val	Gly	Ile	Lys	Leu	Phe	Lys	Lys	Phe
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Val	Ser	Arg	Ala	Ser
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Ser Ser Lys Ala Val
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				20					25					30
Tyr	Met	Leu	Leu	Val	Glu	Ala	Ser	Pro	Trp	Ala	Ala	Lys	Ala	Pro
				35					40					45
Asp	Asp	Gly	Glu	Ala										
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 <210> 63
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 <400> 63
 gaggatattg ctactgaata tatcggttat gcg 33

 <210> 64
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 Gly Gly Arg Pro Val
 1 5
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ccatcaccat 60

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taaggcgcca 60

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 tcaccatgcg 60

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 ccatcaccat gcg 63

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ccatcacccat caccatgcg 69

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60

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<211> 57

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 tgttgat 57

<210> 102
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<223> where n is A, G, C, or T

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<223> where n is A, G, C, or T

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50

ttggatttgg gctgtcgg

69

<210> 103

<211> 69

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 sgcggctgat gcattccca 69

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    tgctaaggcg ccagacgatg gt                                     72

<210> 105
<211> 69
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<223> zone library

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 sgcggctgat gcattccca 69

<210> 106
 <211> 81

<212> DNA
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 <220>
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 <400> 106
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 cvvcvvcvvc gatgcattcc caactatacc a 81

 <210> 107
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 <210> 109

 <211> 30
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 <400> 110
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 1 5 10

 <210> 111
 <211> 30
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 <220>
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 <400> 111
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 <210> 112
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<210> 113
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<220>
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<400> 116
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 1 5

<210> 117
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 <400> 117
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 <210> 118
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 <220>
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 <400> 118
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 <210> 119
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 <220>
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 gctgagcaac ttcgctgcta aggcgccaga cgatgggtgaa gctgcggctc 100

 accatcacca tcaccatgcg 120

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 <220>
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 Ala Gln Leu Ser Asn Phe Ala Ala Lys Ala Pro Asp Asp Gly Glu
 20 25 30

 Ala Ala Ala His His His His His His Ala
 35 40

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<220>
<223> M13 coat protein VIII library

<220>
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<400> 121
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1 5 10 15
Ser Ala Gln Leu Ser Asn Phe Ala Ala Lys Ala Pro Asp Asp Gly
20 25 30
Glu Ala Ala Ala His His His His His His Ala
35 40

<210> 122
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<220>
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<400> 122
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t 51

<210> 123
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1 5 10 15
Ser Val Asp Val Asp Asn Asn Trp Ile Trp Ala Val Gly Ile Ile
20 25 30
Glu Thr Ala Ser Ala Gln Leu Ser Asn Phe Ala Ala Lys Ala Pro
35 40 45
Asp Asp Gly Glu Ala Ala Ala Asp Ala
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tcgtggaggc gtcgccctgg gctgctaagg cgccagacga tggatgaagct	150

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 <400> 294
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Ala Xaa Xaa Xaa Xaa Xaa Xaa
 1 5 10 15
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Val Ile
 20 25 30
 Val Gly Ala Thr Ile Gly Ile Lys Leu Phe Lys Lys Phe Thr Ser Lys
 35 40 45
 Ala Ser
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<223> where Xaa is any amino acid except Ala

<400> 295
Xaa Xaa Xaa Xaa Xaa Xaa Ala Xaa Xaa Ala Phe Asn Ser Leu Gln Ala
 1             5             10             15
Ser Ala Thr Glu Tyr Ile Gly Tyr Ala Trp Ala Met Val Val Val Ile
          20          25          30
Val Gly Ala Thr Ile Gly Ile Lys Leu Phe Lys Lys Phe Thr Ser Lys
      35          40          45

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Ala Ser
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<223> where Xaa is any amino acid except Glu

<400> 296

Ala Glu Gly Asp Asp Pro Ala Lys Ala Ala Xaa Xaa Xaa Leu Xaa Xaa
1 5 10 15
Xaa Ala Thr Xaa Tyr Ile Gly Tyr Ala Trp Ala Met Val Val Val Ile
 20 25 30
Val Gly Ala Thr Ile Gly Ile Lys Leu Phe Lys Lys Phe Thr Ser Lys
 35 40 45

Ala Ser
50

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<223> where Xaa is any amino acid except Val

<400> 297

Ala	Glu	Gly	Asp	Asp	Pro	Ala	Lys	Ala	Ala	Phe	Asn	Ser	Leu	Gln	Ala
1			5					10					15		
Ser	Ala	Thr	Glu	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Val	Ile
		20					25						30		
Val	Gly	Ala	Thr	Ile	Gly	Ile	Lys	Leu	Phe	Lys	Lys	Phe	Thr	Ser	Lys
		35				40						45			
Ala	Ser														
	50														

<210> 298

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 1 5 10 15
 Xaa Ala Thr Xaa Tyr Ile Gly Tyr Ala Trp Ala Met Val Val Val Ile
 20 25 30
 Val Gly Ala Thr Ile Gly Ile Lys Leu Phe Lys Lys Phe Thr Ser Lys
 35 40 45
 Ala Ser
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 <210> 299

 <211> 50
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 Ala Glu Gly Asp Asp Pro Ala Lys Ala Ala Xaa Xaa Xaa Leu Xaa Xaa
 1 5 10 15
 Xaa Ala Thr Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Val Ile
 20 25 30
 Val Gly Ala Thr Ile Gly Ile Lys Leu Phe Lys Lys Phe Thr Ser Lys
 35 40 45
 Ala Ser
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 <210> 300

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<223> where Xaa is any amino acid except Val

<400> 300

Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Ala	Xaa	Xaa	Ala	Xaa	Xaa	Xaa	Leu	Xaa	Xaa
1				5					10					15	
Xaa	Ala	Thr	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Val	Ile
			20					25						30	
Val	Gly	Ala	Thr	Ile	Gly	Ile	Lys	Leu	Phe	Lys	Lys	Phe	Thr	Ser	Lys
			35				40					45			
Ala	Ser														
			50												